

FIX-N-FAX #63

CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION

No. 63

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Continuous Duty Solenoids Fire Engines (All Models)

“Continuous duty” solenoids are used on all model fire engines. Commonly used quality brand solenoids are Cole Hersee, Delco Remy, and Pollak. Both insulated and grounded base type solenoids are used extensively in auxiliary starting circuits, hose reel motor circuits, and emergency equipment circuits.

A number of premature solenoid failures have been reported recently. The symptoms on the starter circuit are no start and/or the engine attempts to start when the vehicle is driving down a rough road. The reel solenoids usually do not release and reel motors continue to turn. The emergency equipment circuit solenoid usually fails to engage; therefore, no current flows to emergency equipment.

The following recommendations are being made:

1. Mounting of the solenoid should be in areas least affected by engine heat.
2. When using an insulated type solenoid (Cole Hersee 240590), ground from one of the small terminals should go to a common ground on vehicle with quality terminal ends and star washer. Do not ground on mounting base bolt or screw.
3. When using a grounded type solenoid (Cole Hersee 24082), make sure mounting surface is unpainted, free of rust. Use clean mounting bolts or screws with star washers.
4. Use two wrenches when tightening terminals to prevent terminal studs from turning. When terminal studs turn, internal damage occurs to the solenoid, causing complete or premature failure.
5. Mounting position of the Cole Hersee continuous duty solenoid for Forestry application is important. The cone shaped end is to be mounted down when the solenoid is mounted vertical as illustrated (image not available).

Replace solenoids shall be:

Cole Hersee 24059 (insulated) or equal
Cole Hersee 24082 (grounded) or equal

(see [FIX-N-FAX INDEX](#))